

Appl. No.: 10/234,515
Filed: September 5, 2002
Amdt. Dated January 3, 2008

Amendments to the Drawings:

The first attached sheet of drawings includes Figure 1, Figure 2A, and Figure 2B. This sheet of drawings replaces the original sheet including Figure 1, Figure 2A, and Figure 2B and includes added annotations that all three illustrated figures illustrate prior art.

The second attached sheet of drawings includes Figure 3A, Figure 3B, and Figure 4. This sheet of drawings replaces the original sheet including Figure 3A, Figure 3B, and Figure 4 and includes added annotations that Figure 3A and Figure 3B illustrate prior art.

The third attached sheet of drawings includes added Figure 9, which does not illustrate any new matter. This sheet of drawings is to be added following the 4 originally filed sheets. Figure 9 illustrates the annular dome feature.

REMARKS

In the Office Action, the Examiner objects to the drawings of Figures 1, 2A, 2B, 3A, and 3B for not being designated by a legend labeled "Prior Art". The Examiner further objects to the drawings under 37 C.F.R. 1.83(a) as not showing every feature of the invention specified in the claims. Claims 1-18 are objected to because of informalities. Claims 1-18 are rejected under 35 U.S.C. § 102(a, e) as being anticipated by U.S. Pat. No. 6,750,408 to Inoue et al. ("Inoue"). Claims 1-10 and 1-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 6,586,689 to Kuriyama ("Kuriyama").

In response to the Office Action of September 21, 2007, Applicant has amended Claims 2-11 and 14-18 as suggested by the Examiner to overcome the objection for informalities. Applicant respectfully submits that the preamble to Claim 12 refers to "An input apparatus" and not to "A dome switch" as inferred in the Office Action and as such an amendment to Claim 12 was not necessary to overcome the objection for informalities. Applicant has amended Figures 1, 2A, 2B, 3A, and 3B to include a legend labeling each figure as "Prior Art."

Applicant has added a new Figure 9 to overcome the Examiner's objection under 37 C.F.R. 1.83(a) as well as two paragraphs to the Specification which describe Figure 9. Figure 9 shows the "annular dome" feature, which is now recited in Claims 1-12 as described and supported below. No new material was added by the Figure or the supporting paragraphs. In particular, basis for the "annular dome" feature and term "annular" can be found at least at page 9, line 19. Basis for the "upper dome sheet" can be found at least at page 9, line 3. Basis for the "underlying substrate" can be found at least at page 9, line 10. Since no new matter was added by new Figure 9 or the supporting paragraphs added to the Specification of the application and the new Figure 9 in combination with the previously filed figures shows every feature of the invention specified in the amended claims, including the "annular dome" feature, Applicant respectfully submits that the objection under 37 C.F.R. 1.83(a) is overcome.

Applicant has amended independent Claim 1 as well as its dependent Claims to further patentably distinguish the cited references. Applicant has also deleted Claim 5 and added new Claim 19 dependent from Claim 13. In light of the amendments to and arguments with regard to

independent Claim 1 as well as the arguments regarding independent Claim 13, which are discussed herein below, Applicant respectfully submits that the rejections are overcome and all claims are in condition for allowance.

Independent Claim 1 and its Dependent Claims are Patentably Distinct Over the Cited

References

In the Office Action, the Examiner asserts that independent Claim 1 is anticipated both by Inoue and by Kuriyama. Amended independent Claim 1 is generally directed to an annular dome switch structure. Support for the Amendment may be found in the specification as discussed above in connection with the addition of Figure 9.

Inoue generally discloses a multi-directional operational switch and operating disc 33 which upon being pressed at its upper side tilts and presses against an elastic pressing member 32 thus making hard rings of a driving member 28 press on a resister sheet 25. This operation allows resister layers 26 and the resister sheet 25 to directly contact annular electrically conductive layers 22a and 22b facing the resister layers 26 in a desired sequence.

The Office Action asserts that Inoue discloses a dome switch. The Examiner seems to suggest that the dome switch is disclosed by features 22a and 22b. However, as mentioned in the description, features 22a and 22b are annular conductive layers. *See, e.g.* Col. 3, Lines 39-40 of Inoue. It is respectfully submitted that the operation switch of Inoue is not a dome switch. That is, a switch having a raised dome sheet and underlying substrate defining a dome shaped cross section (e.g. page 1, lines 23 to 32 of the present application). It is true that Inoue discloses annular conductive layers 22a and 22b between an insulating board 21 and a resister sheet 25. When driving member 28 presses on resister sheet 25, resister layer 26 makes electrical contact with the annular conductive layers 22a and 22b. However, Inoue does not disclose these features in the arrangement of a dome. Nevertheless, in order to clarify that the claimed invention is directed to an annular dome switch (i.e. a dome switch shaped in a ring) claim 1 has been amended to provide additional structure features to further define the annular dome switch.

In particular, Claim 1 now sets forth an upper dome sheet which extends from an underlying substrate defining a raised cross-sectional shape that extends at least substantially

along the length of an annular shaped path. Inoue fails to teach or suggest such a feature and therefore the proposed amended Claim 1 is novel over Inoue.

The Office Action further asserts that Kuriyama anticipates Claim 1. Again, the arguments in the Office Action are rendered moot in light of the amendments to independent Claim 1. Kuriyama discloses a multi-directional switch provided with a central switch and peripheral switches arranged about it in which a key top is pressed to actuate a desired one of the switches. The Office Action suggests that Kuriyama discloses that features labeled 32 and 33 are a dome switch. It is true that Kuriyama does disclose dome switches, e.g. 36, 35 shown in the figures. However, features 32 and 33 are contacts which comprise part of a central switch 320 (e.g. column 5, line 41). Central switch 320 is clearly a switch as described in the background of the present application and does not describe an annular dome switch as required by the amended Claim 1. Therefore, Claim 1 is novel over Kuriyama.

Both Inoue and Kuriyama are silent on providing an annular dome switch having the features required by amended Claim 1. Indeed, neither reference remotely suggests providing an annular dome switch. Furthermore there is no motivation to modify or combine either reference to provide an annular dome switch as required by claim 1.

For example Inoue does not teach or suggest a raised cross-sectional shape which extends substantially along a length of an annular shaped path. In contrast, Inoue only discloses a flat planar arrangement as shown e.g. figure 1. One having ordinary skill in the art would not be motivated to substitute the planar arrangement taught by Inoue, provided by layers 25, 26 and annular conductive layers 22a, 22b, with a raised annular cross sectional shape of the claimed invention because doing so would increase the height of the multidirectional operation switch. Inoue teaches away from increasing the height of the multidirectional operation switch and as such aims to reduce the thickness and the overall dimensions of the operation switch (e.g. column 2, lines 18 to 22). Therefore one having ordinary skill in the art would not be motivated to modify the teachings Inoue such that they fell within the scope of Claim 1 because this would go against the teachings of Inoue.

Likewise, a person having ordinary skill in the art would not be motivated to modify the teachings of Kuriyama so that the multi-directional switch fell within the scope of amended

Claim 1. Kuriyama teaches that central switch 320 is actuated by central protrusion 5CP. Therefore, a person having ordinary skill in the art would understand that if central switch 320 were an annular dome switch, central protrusion 5CP could no longer actuate the central switch. Therefore, there is no motivation for the skilled person to modify the central switch of Kuriyama. Furthermore, there is no motivation for the skilled person to modify the peripheral switches 330 to incorporate an annular dome switch because Kuriyama teaches that the multi directional switch only has four directions. Therefore an annular dome switch would not provide any benefit over the existing four peripheral switches 330.

Therefore, since neither Inoue nor Kuriyama teaches or suggests an annular dome switch structure as recited by independent Claim 1 and there is no motivation to modify or otherwise combine the references, applicant respectfully submits that the rejections of Claim 1 is overcome and Claim 1 is in condition for allowance. Since dependent Claims 2-12 each contain the recitations of independent Claim 1, Applicant respectfully submits that the rejection of these claims is overcome for at least the reasons discussed above and as such Claims 2-12 are in condition for allowance.

Independent Claim 13 and its Dependent Claims are Patentably Distinct Over the Cited References

The Office Action asserts that independent Claim 13 is anticipated by Inoue and Kuriyama respectively. Applicant respectfully disagrees with the Office Action on this point. In particular, the Office Action states that Inoue and Kuriyama have a rotator wheel as recited by Claim 13. Applicant respectfully submits that Claim 13 explicitly states that the rotator wheel rotates about an axis perpendicular to the upper planar surface of the rotator wheel. Neither Inoue nor Kuriyama, despite the Office Action's assertions to the contrary, disclose such a feature.

With regard to Inoue, the Office Action insinuates that operated disc 33 of Inoue is a rotator wheel. However, Inoue clearly states that the operator disc 33 includes an elastic pressing member which is fixedly mounted to a lower side of a hard operating head 31 (e.g. column 4, lines 20 to 22). In other words, the operating disc 33 is fixed to the body of the electronic device

by virtue of elastic layer 32 being fixed to the electronic device. Inoue teaches that the operating disc 33 is fitted to fitting region 28 of the driving member 28 which supports a center disc region 31 of the hard operating head 31 (see column 4 lines 23 to 27). Referring to Figure 2 of Inoue, driving members 28 and 29 extend through holes in sheet 25 and engage with two holes 21a provided in the insulating board 21. Therefore, Inoue clearly teaches that the operating disc 33 is connected and fixed to the driving member 28 which engages with holes in the insulating board 21. Therefore there is no way the operated disc 33 can rotate about an axis perpendicular to the upper surface of the operating disc 33. Indeed, Inoue at most suggests that operator disc can tilt.

Likewise, Kuriyama fails to teach or suggest rotation of key top 40 and also fails to provide enough room for key top 40 to rotate. For example, the key top is clearly not meant to rotate because otherwise the peripheral switches cannot be properly actuated.

Therefore neither Kuriyama nor Inoue nor any combination thereof teaches or suggests providing the feature of a rotator wheel which rotates about an axis perpendicular to the planer surface of a rotator wheel as recited by independent Claim 13. As such, Applicant respectfully submits that the rejection of Claim 13 is overcome and Claim 13 is in condition for allowance. Since dependent Claims 14-18 each contain the recitations of independent Claim 13, Applicant further respectfully submits that the rejection of these claims is overcome for at least the reasons discussed above and as such Claims 14-18 are in condition for allowance.

New Claim 19 is in Condition for Allowance

New Claim 19 depends from independent Claim 13 and as such is patentably distinct from the cited references for at least those reasons discussed above in connection with Claim 13. Claim 19 defines that the select means of Claim 13 is the annular dome switch of Claim 1. Since Claim 19 includes every recitation of Claim 13 and further recites the structure of Claim 1, which is patentably distinct over the cited references for the reasons discussed above, Applicant respectfully submits that new Claim 19 is patentably distinct over the cited references and in condition for allowance.

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CONCLUSION

In view of the amended claims and remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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